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Appendix B

Ruble Dollar Ratios

The accompanying table contains examples of the scope and coverage of presently available data on ruble prices. It should be emphasized that the table illustrates ruble-dollar price ratios, and that variations among individual ratios, do not necessarily reflect variations in relative costs. One of the prime objects of intelligence research in the immediate future is to determine the relation between prices and costs in the Soviet Union for various commodity items and groups of commodities, and until such a thoroughgoing investigation is completed, both the following remarks and the ratios themselves must be considered preliminary and tentative.

It will be noted that variations among the ratios in group 2 for the more specific commodity items are much greater than variations among those in group 1 for commodity groups. The ratios in all cases represent ruble prices adjusted only to exclude the turnover tax from the prices of those commodities on which it is levied, that is, on agricultural commodities and petroleum products. In no case has an attempt been made to adjust ruble prices for the cost elements which are not recognized in Soviet accounting, namely, rent, depletion, and interest.

Two comments should be made about the average ratio for agricultural commodities: 1) no specific commodity ratios are presented in the table because of present uncertainties about the size of the turnover tax rate on a number of important agricultural items, although the total for all

S-E-C-R-E-T

agricultural commodities is known; 2) the average price ratio of 11 to 1 represents a considerable under-statement of an average cost ratio because no rental payments are included in Soviet price computations and not all tractor amortization and operational charges are included.

It will be noted that the ratios for nonferrous metals in various degrees of fabrication are among the highest of those presented. These price ratios, too, understate relative costs in varying degrees because of the omission of depletion charges from Soviet accounting.

The low level of the price ratios for machinery items perhaps reflects the fact that for a quarter of a century the Soviet Union has concentrated its productive efforts on heavy industry. Further, this sample probably consists mainly of standard mass-produced items. Custom built machinery might be expected to bear higher ruble-dollar price ratios. Again these price ratios understate relative costs in varying degrees because of the omission of a depletion charge from the prices of the metals used in their construction, and because of the omission of an interest charge in Soviet price computations.

Chemicals as a group are generally possessed of high ratios although there are some extreme exceptions such as chlorine at 3:1. With further research it may be found that many broad groups of chemicals are of uniformly high cost.

The high level of the price ratios for solid fuels is in part explained by the omission from the list of lignite, an inexpensive and widely used type of fuel in the USSR.

S-E-C-R-E-T

S-E-C-R-E-T

Price ratios for chemicals, petroleum products, solid fuels and iron and steel products similarly reflect total costs in varying degrees, depletion and interest charges representing the major omissions.

S-E-C-R-E-T

S-E-C-R-E-T

Selected Ruble-Dollar Price Ratios a/ 1950

Commodity Group or Commodity	Price: Rubles per dollar
1. Group Averages <u>b/</u>	
Total commodity and service output	8
Total commodity output	10
Total agricultural production	11
Non-ferrous metals, primary	16
All machinery	7
Construction and mining machinery	6
Machine and cutting tools	3
Oil field machinery and tools	11
Electrical and Communications equipment	8
Chemicals	14
Solid fuels	21
Iron and steel	9
Automotive equipment including tractors	10
Railroad equipment	7
Merchant shipbuilding	8
2. Commodity Items or Sub-categories	
Aluminum, ingot	18
Aluminum, casting alloys	11
Aluminum, sheet	16
Copper, electrolytic	16
Copper, sheet	12

S-E-C-R-E-T

S-E-C-R-E-T

Copper, rod, round	17
Copper wire	15
Nickel	37
Cobalt	103
Lead	14
Lathe, engine, heavy duty, 40 $\frac{1}{2}$ " swing, 120"/200" Centers	4
Milling machine, horizontal, 33 $\frac{1}{2}$ x 9 $\frac{1}{2}$ table	2
Drill, upright, box column geared head, 1" diameter drill	3
Planer, 10.0 h.p., 24" width of shave	5
Bulldozer, without tractor	7
Road roller, 6 ton	55
Pneumatic rock drill, 340 rpm, 22 lb.	3
Coal cutter	5
Battery, locomotive, 6000 lb. chassis	5
Centrifugal artesian pump, 800 GPM, 330 ft. head	10
Cylindrical dryer, horizontal drum type, 1320 sq. ft.	12
Vacuum filter, cloth disc type, 101 sq. ft. surface	8
Tractor (ACKhTZ-1-T4) 34 h.p. gas	9
Turbines	8
Motors	8
Wire and cable	11
Motors, 3 phase induction, voltage 208/220 RPM 1800, 1/3 H.P.	9
Decade inductor: 3 decades 0.1 mh steps	8

S-E-C-R-E-T

Radio end items	7
Electron receiving tubes	13
Vacuum tube voltmeter and ohmmeter: 0-10,000 volts and 0.2-500 megohms	5
Audio oscillator: 18-1800 cycles	14
Sulphur	41
Chlorine	3
Copper sulphate	18
Soda ash, light	14
Acid, sulphuric tech 60° Baume	18
Acid, metric, 38° Baume	6
Acid, hydrochloric, 18° Baume	21
Ammonia, liquid	20
Barite ore	18
Potassium hydroxide, USP	4
Toluene	19
Gasoline, heavy (automobile and tractor) S.G. 0.745	
Kerosene, S.G. 0.826	9
Diesel fuel, motor fuel, light 0.851	2
Diesel fuel, motor fuel, heavy	3
Diesel fuel, solar oil, 0.871	3
Auto-tractor oil (lubricant) S.G. 0.911	5
Motor oil, diesel, (lubricant) S.G. 0.916	3
Oil, industrial, spindle (coolant)	3

S-E-C-R-E-T

Oil, volta, S.G. 0.886	5
Oil, cylinder (lubricant) S.G. 0.886	2
Graphite grease	5
Coal, anthracite, lump and broken	10
Coal, bituminous, steam	25
Coal, bituminous, coking coal	20
Pig iron, bessemer	8
Silico-manganese, ferro-alloy	7
Steel, structural I beams	7
Steel, bar stock, hot rolled, round, A 151, 1045, 3/8"	11
Steel, carbon and low alloy, C 1.20, Mn. 65, Co 1.4 Mo .45 Rockwell 61-64	3
Steel, high speed, C .70, W 18.0, V 1.0, Cr 4.0, Brinell 217-235	6

- a. Wholesale prices excluding turnover tax, where applicable.
- b. Averages of ratios for individual commodities weighted by Soviet output.